

Review Form 3

Journal Name:	Journal of Materials Science Research and Reviews
Manuscript Number:	Ms_JMSRR_129445
Title of the Manuscript:	ASSESSMENT OF HEAVY METALS (MERCURY AND ARSENIC) LEVELS IN LEMON GRASS AT KIHONDA AND MAFISA (VIWANDANI) IN MOROGORO, TANZANIA.
Type of the Article	

General guidelines for the Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: Comments

	Reviewer's comment	Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This manuscript addresses the critical issue of heavy metal contamination in agricultural produce, focusing on mercury and arsenic levels in lemongrass from Morogoro, Tanzania. Such research is vital for the scientific community as it contributes to understanding the environmental and public health implications of heavy metal exposure through dietary intake. By examining contamination levels in commonly consumed crops, this study provides essential data for policymakers, agricultural stakeholders, and health professionals to mitigate risks and ensure food safety. Furthermore, the findings highlight the need for sustainable agricultural practices and ongoing monitoring to prevent contamination, making it a valuable contribution to environmental health and food security research.	THANKS
Is the title of the article suitable? (If not please suggest an alternative title)	Suggested alternative: "Heavy Metal Contamination in Lemongrass: Mercury and Arsenic Analysis from Morogoro, Tanzania	THANKS
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	The abstract is too generic and lacks quantitative details from the study. For example, specific concentration levels of mercury and arsenic, as well as a summary of key findings, should be included to enhance clarity and interest.	improved
Is the manuscript scientifically, correct? Please write here.	Could be improved	improved
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	Many references are outdated or incomplete. Include more recent studies to provide context and support findings. (1) Oloruntoba, Adefarati, et al. "Heavy metal contamination in soils, water, and food in nigeria from 2000–2019: A systematic review on methods, pollution level and policy implications." <i>Water, Air, & Soil Pollution</i> 235.9 (2024): 586. (2) Oloruntoba, Adefarati, Adedeji Peter Oloruntoba, and Ajala Rasheedat Oluwaseun. "Determination of heavy metal levels in green pea (Pisum sativum): a case study of selected markets in Abuja, FCT." <i>American Journal of Innovative Research and Applied Sciences</i> 5.5 (2017): 343-349.	improved
Is the language/English quality of the article suitable for scholarly communications?		

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Optional/General comments	<p>Introduction: While the introduction provides some context, the link between the presence of mercury and arsenic in lemongrass and its impact on public health is inadequately discussed. Include relevant global and regional data to strengthen the justification for the study. The objectives and research problem are repetitive. Streamline the text for conciseness.</p> <p>Research Methods: Sampling size is insufficient (only two samples). This significantly limits the generalizability of the results. Provide justification for this sample size or propose expanding it. The methodology description lacks sufficient detail, especially regarding the validation of the Atomic Absorption Spectroscopy (AAS) technique. Mention quality control measures such as calibration procedures or standard reference materials. Explain why the selected sampling sites (Kihonda and Mafisa) are representative of contamination levels across Morogoro Municipality.</p> <p>Results:The results section primarily lists data without offering meaningful interpretation or comparison to regulatory standards such as WHO or FAO limits.The discussion of variability between sites (Kihonda and Mafisa) is insufficient. Investigate potential factors such as industrial proximity, soil composition, or water quality contributing to the differences.</p> <p>Figures and Tables: Figure 2 is labeled inaccurately, and the text accompanying it lacks clarity. Revise for consistency and ensure visual elements effectively support the narrative. Units in Table 2 are missing or inconsistent. Mercury and arsenic concentrations should include clear units (e.g., mg/kg).</p> <p>Statistical Analysis: Inferential statistics are mentioned but inadequately described. Provide more detail on the statistical methods employed, including assumptions for the t-test and ANOVA. The lack of statistically significant differences between sites should be discussed in the context of the sample size and variability.</p> <p>Discussion:The discussion does not adequately link findings to broader implications, such as policy or agricultural practices. Explore how these results could influence farming methods or public health interventions. The ecological and economic implications of heavy metal contamination in agricultural produce are not discussed. Include this perspective for a more holistic view. Compare the results with other related studies such as Oloruntoba, Adefarati, et al. "Heavy metal contamination in soils, water, and food in nigeria from 2000–2019: A systematic review on methods, pollution level and policy implications." <i>Water, Air, & Soil Pollution</i> 235.9 (2024): 586. Oloruntoba, Adefarati, Adedeji Peter Oloruntoba, and Ajala Rasheedat Oluwaseun. "Determination of heavy metal levels in green pea (Pisum sativum): a case study of selected markets in Abuja, FCT." <i>American Journal of Innovative Research and Applied Sciences</i> 5.5 (2017): 343-349.</p> <p>Policy Implications:The manuscript lacks a section explicitly outlining policy recommendations based on the findings. Suggest strategies for monitoring and mitigating heavy metal contamination in crops.</p> <p>Conclusion:The conclusion repeats the results without synthesizing the broader significance of the findings. Summarize actionable insights and propose directions for future research.</p> <p>Grammar and Style: Numerous grammatical errors affect readability. For example:</p> <ul style="list-style-type: none">▪ "Grass lemon" should be replaced with "lemongrass" throughout.▪ "Were willed" in Section 3.3.1 should be corrected to "were rinsed."○ Sentences are often overly long and convoluted. Simplify for clarity.	
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PART 2:

	Reviewer’s comment	Author’s comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	